

We Need an Additional Seat at the Critical Care Multidisciplinary Team Table for our Speech-Language Pathologists

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Each year more than 700,000 patients develop acute respiratory failure (ARF) requiring mechanical ventilation. The care of these patients costs an estimated \$27 billion, or 12% of all hospital expenses (1). Based on a 65% rate of survival, 455,000 patients with ARF are extubated and eventually survive their hospitalization (1). Unfortunately, many of these patients who survive ARF must cope with debilitating consequences of their critical illness, including neuromuscular weakness, cognitive dysfunction, and symptoms of depression and anxiety (2). Patients who survive ARF commonly report limitations in their physical functioning, including the inability to lift and carry groceries, climb stairs, bend, kneel, and walk moderate distances. With the increased awareness and interest in long-term outcomes in patients who survive ARF, previously underrecognized sequelae have also been identified.

One such long-term sequela of ARF is postextubation dysphagia or swallowing dysfunction (3). Occurring in as many as 44% of patients who survive ARF, postextubation dysphagia can result in overt or “silent” aspiration. Both are associated with the development of pneumonia, percutaneous feeding tube placement, long-term care facility admission, and increased hospital mortality (3–5). As extubated patients with ARF recover, the complications of potential aspiration must be weighed against the consequences of inappropriately delaying resumption of oral feeding. Delayed resumption of oral nutrition is associated

with deleterious consequences, including prolonged enteral tube feeding, increased caregiver burden, patient dissatisfaction, and increased health-related costs (6–8).

To make a balanced decision between the complications of aspiration and the consequences of delayed resumption of oral nutrition, many critical care practitioners turn to speech-language pathologists to determine when it is safe to restart oral nutrition. In more than 60% of patients who survive ARF, speech-language pathologists perform a bedside evaluation as their sole assessment to detect aspiration and determine feeding recommendations (9). The bedside evaluation consists of two components: (1) a history and physical examination, and (2) an assessment of the patient’s ability to swallow foods and liquids of different consistencies. Although hospital protocols vary, a speech-language pathologist’s bedside evaluation usually consists of 8 to 12 swallowing assessments performed with two to six different dietary textures. Speech-language pathologists do not routinely order or perform gold standard tests for dysphagia and aspiration, such as a videofluoroscopic swallow study or flexible endoscopic swallow study. This is in part due to appropriate safety concerns about transporting critically ill patients to radiology for a videofluoroscopic swallow study and the lack of equipment or expertise to perform the flexible endoscopic swallow study.

Although the decision of when to resume oral feeding is often deferred to speech-language pathologists, most critical care practitioners are unaware of the level of

training required to become a speech-language pathologist or their scope of practice. Certified by the American Speech-Language-Hearing Association, speech-language pathologists require a master’s, doctoral, or other postbaccalaureate degree. To maintain their credentialing, speech-language pathologists are required to complete ongoing maintenance of certification programs. Currently, there are approximately 135,000 practicing speech-language pathologists in the United States. Reflecting a tremendous expansion in their areas of expertise, the annual employment growth rate for speech-language pathologists has been estimated to be almost 20% (10). Almost half of all speech-language pathologists continue to work in schools and focus on children with speech and language delays. However, a rising proportion of speech-language pathologists care for adult patients with a variety of underlying medical and neurological disorders. Swallowing dysfunction evaluations have recently more than doubled and now account for more than 25% of all speech-language pathologist referrals (11). In the inpatient hospital setting, speech-language pathologists currently devote 56% of their efforts to the evaluation and treatment of dysphagia, representing a 19% increase over the past 9 years (9).

In this issue of *AnnalsATS*, Brodsky and colleagues (pp. 1545–1552) performed a secondary analysis of a prospective multisite cohort study (12). This team of investigators followed patients with acute lung injury who were mechanically

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ventilated via oral endotracheal tube. The study determined the prevalence of swallowing assessments for these patients after oral endotracheal intubation and the patient and organizational factors associated with performing a swallowing assessment (12). Their study demonstrated that 44% of patients with acute lung injury received some form of swallowing assessment and that female sex, intubation duration, and hospital site were all independently associated with having a swallowing assessment. The results highlight the existing variability in clinical practice of the postextubation swallowing assessment. As identified by the authors, limitations of their study include issues regarding generalizability (patients enrolled at only four hospitals) and the inability to determine the actual frequency of dysphagia in patients recovering from acute lung injury. Given the estimated high prevalence of postextubation dysphagia, it is likely that many patients did not receive adequate screening and evaluation.

This study builds on the very recent expansion of dysphagia-related research to

include critically ill patients recovering from ARF. Initially, dysphagia research primarily studied patients with head and neck cancer and stroke patients (13, 14). For these specific patient populations, investigators have developed diagnostic algorithms for dysphagia and examined novel therapies to treat dysphagia and prevent aspiration. The proposed mechanisms responsible for dysphagia and aspiration may be different in patients recovering from ARF. Additionally, the consequences of aspiration may be greater in patients who survive ARF due to their diminished respiratory reserve (15). Therefore, the results of previous research in other patient populations likely cannot be applied to patients recovering from ARF.

Based on the estimated high prevalence of this disorder, there is currently a relative paucity of dysphagia-focused research involving patients who survive ARF. Despite the limited research and knowledge on how to best use their expertise, there is an increasing use of speech-language pathologists in the care of patients who survive ARF. Among the hospitals involved in the Brodsky study, the

use of speech-language pathologists and the prevalence of swallowing assessments varied by hospital site. In general, variability in the delivery of health care negatively impacts the care of some patients and can increase health-care costs. Importantly, the Brodsky study raises awareness of the increased use of speech-language pathologists in the multidisciplinary care of critically ill patients and focuses the need for additional research to validate swallowing assessments and develop algorithms to guide clinical care (12). In addition, studies that identify the mechanisms responsible for postextubation dysphagia and aspiration would pave the way for the development of targeted therapies for these patients. In summary, by demonstrating variability in use of swallowing assessments, the study by Brodsky and colleagues provides important evidence to support additional dysphagia-related research that will improve the care of the 455,000 patients who survive ARF each year (12). ■

Author disclosures are available with the text of this article at www.atsjournals.org.

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